IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Russell, et al.

Serial No. To Be Assigned Filed: Concurrently Herewith

For:

LACTOBACILLUS B-GLUCURONIDASE AND DNA ENCODING THE

SAME

September 29, 2003

Mail Stop Patent Application Commissioner for Patents Post Office Box 1450 Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Attached is a list of documents on form PTO-1449. Items 1-10 listed on the PTO-1449 were cited in parent application Serial No. 09/862,660, filed May 21, 2001. Since the benefit of this application is claimed under 35 U.S.C. §120, no copies need to be furnished in accordance with 37 C.F.R. §1.98(d); however, copies will be furnished on request. It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. §1.56 and Section 609 of the MPEP.

No fee is believed due. However, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-0220.

Respectfully submitted

Kenneth D. Sibley

Registration No. 21,665

USPTO Customer No. 20792 Myers Bigel Sibley & Sajovec, P.A. Post Office Box 37428 Raleigh, North Carolina 27627 Telephone: (919) 854-1400 Facsimile: (919) 854-1401

Application Number To Be Assigned First Name of Patenter or Application Pages Columns, Lines, Pages or Relevant Figures Appear	Substitute	form 14	49Δ/PT(<u> </u>			T		Con	plete if Knowi						
INFORMATION DISCLOSURE Filing Date Concurrently Herewith	Substitute form 1449A/PTO															
First Named Inventor Group Art Unit Examiner Name Sheet 1	INFORMATION DISCLOSURE															
Group Art Unit Examiner Sheet 1																
Examiner Cite Initials* Cite Number Examiner Cite Number Examiner Number	SIAILW		JI AFI	LICAN	'											
Search 1	lusa as ma	ny cho	ate ae ne	ooccon/)												
Examiner Initials' Cite No. U.S. Patent Document Name of Patente or Applicant Cited Document MM-DD-YYYY M-Relevant Passages or Relevant Pagures or Rele			to as ne		1											
Examiner Cite No. U.S. Patent Document Number Kind Code (If known) Rind Code (Officer	<u> </u>		01	!	IIS				3031.314DV						
Number Kind Code (if known) Strict Document Cited Document MM-DD-YYYY Merc Relevant Passages or Relevant Figures Appear	Examiner	Cite N	0.	U.S. Pat	ent Do								s Line	es .		
FOREIGN PATENT DOCUMENTS Pages, Columns, Lines, Toffice Number Kind Code (fi known) Pages, Columns, Lines, Toffice Number Kind Code (fi known) Pages, Columns, Lines, Toffice Number Kind Code (fi known) Pages, Columns, Lines, Toffice Number Kind Code (fi known) Pages, Columns, Lines, Toffice Number Kind Code (fi known) Pages, Columns, Lines, Toffice Number Kind Code (fi known) Pages, Columns, Lines, Toffice Number Relevant Pages, Columns, Lines, Toffice Pages, Columns, Lines,												Where Relevant Passages				
Examiner Initials* No. Cite Foreign Patent Document Name of Patentee or Applicant of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, of Cited Document MM-DD-YYYY Passages or Relevant Pages, Columns, Lines, or Lines, and Lines, Li				Number					İ	MM-DD-YYYY				s		
Examiner Initials* No. Office Number Kind Code Applicant of Cited Document MM-DD-YYYY Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines,						(Appear				
Examiner Initials* No. Office Number Kind Code Applicant of Cited Document MM-DD-YYYY Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines,									1							
Examiner Initials* No. Office Number Kind Code Applicant of Cited Document MM-DD-YYYY Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines,																
Examiner Initials* No. Office Number Kind Code Applicant of Cited Document MM-DD-YYYY Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines,																
Examiner Initials* No. Office Number Kind Code Applicant of Cited Document MM-DD-YYYY Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines,													-			
Examiner Initials* No. Office Number Kind Code Applicant of Cited Document MM-DD-YYYY Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines, Mplicant of Cited Document Pages, Columns, Lines,		1				FOREIG	GN PA	TENT DOCUMENTS								
Office Number Kind Code (fi known) Document MM-DD-YYYY Passages or Relevant Figures Appear OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPTAL LETTERS), title of the article (when appropriate), title of the time (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-lessue number(s), publisher, city and/or country where published I Akao, Talko, Purification and Characterization of Glycyrrhetic Acid Mono-glucuronide &-p-Glucuronidase in Eubacterium sp. GLH, Biol, Pharm, Bull, Vol. 22, No. 1, pp. 80-82 (1999) Akao, Talko, Competition in the Metabolism of Glycyrrhetic Acid Mono-Glucuronide by Mixed Eubacterium sp. GLH and Ruminococcus sp. PO1-3, Biol, Pharm, Bull, Vol. 23, No. 2, pp. 149-154 (2000) De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin, Nutr., Vol. 71, pp. 405-11 (2000) 4 Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environment	Examiner	Cite							Date	Date of Publication Pa				Т		
To the price of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, calalog, etc.), date, page(s), volume-issue number(s), publisher, city and or country where published 1 Akao, Taiko, Purification and Characterization of Glycyrnhetic Acid Mono-glucuronide \$\mu_{Po}\$-Glucuronidase in Eubacterium sp. GLH, Biol, Pharm, Bull., Vol. 22, No. 1, pp. 80-82 (1999) 2 Akao, Taiko, Competition in the Metabolism of Glycyrnhizin with Glycyrnhetic Acid Mono-Glucuronide by Mixed Eubacterium sp. GLH and Ruminococcus sp. PO1-3, Biol, Pharm, Bull., Vol. 23, No. 2, pp. 149-154 (2000) 3 De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin, Nutr., Vol. 71, pp. 405-11 (2000) 4 Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) 5 Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) 6 Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) 7 McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) 8 McConnell, M.A., et al., Andee on lactobacilli and \$Bolicus Internation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) 9 Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus namnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: In	Initials*	No.	Office	Number		Kind Cod	de									
The price are include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the title				Hamber				Document		MM-DD-YYYY						
 Examiner Initials*																
 Examiner Initials*																
 Examiner Initials*			ļ													
 Examiner Initials*			<u> </u>													
 Examiner Initials*		L	J	<u></u>			L		<u> </u>	j						
Initials* No. serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published 1 Akao, Taiko, Purification and Characterization of Glycyrrhetic Acid Mono-glucuronide β-p-Glucuronidase in Eubacterium sp. GLH, Biol. Pharm. Bull., Vol. 22, No. 1, pp. 80-82 (1999) 2 Akao, Taiko, Competition in the Metabolism of Glycyrrhizin with Glycyrrhetic Acid Mono-Glucuronide by Mixed Eubacterium sp. GLH and Ruminococcus sp. PO1-3, Biol. Pharm. Bull., Vol. 23, No. 2, pp. 149-154 (2000) 3 De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin. Nutr., Vol. 71, pp. 405-11 (2000) 4 Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) 5 Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) 6 Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) 7 McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med., Microbiol., Vol. 47, pp. 407-416 (1998) 8 McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) 9 Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria,	L			ОТІ	IER I	PRIOR ART - N	ION PA	ATENT LITERATURE	DOC	UMENTS				[
1 Akao, Taiko, Purification and Characterization of Glycyrrhetic Acid Mono-glucuronide β-ρ-Glucuronidase in Eubacterium sp. GLH, Biol. Pharm. Bull., Vol. 22, No. 1, pp. 80-82 (1999) 2 Akao, Taiko, Competition in the Metabolism of Glycyrrhizin with Glycyrrhetic Acid Mono-Glucuronide by Mixed Eubacterium sp. GLH and Ruminococcus sp. PO1-3, Biol. Pharm. Bull., Vol. 23, No. 2, pp. 149-154 (2000) 3 De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin. Nutr., Vol. 71, pp. 405-11 (2000) 4 Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) 5 Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) 6 Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) 7 McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med., Microbiol., Vol. 47, pp. 407-416 (1998) 8 McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) 9 Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene		aged presenting actales at a data agental refress table arrefully a blaker at a sufficient and a sufficient and a sufficient										T				
Glucuronidase in Eubacterium sp. GLH, Biol, Pharm. Bull., Vol. 22, No. 1, pp. 80-82 (1999) 2 Akao, Taiko, Competition in the Metabolism of Glycyrrhizin with Glycyrrhetic Acid Mono-Glucuronide by Mixed Eubacterium sp. GLH and Ruminococcus sp. PO1-3, Biol. Pharm. Bull., Vol. 23, No. 2, pp. 149-154 (2000) 3 De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin. Nutr., Vol. 71, pp. 405-11 (2000) 4 Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) 5 Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) 6 Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) 7 McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) 8 McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) 9 Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene	initiais												 			
 Akao, Taiko, Competition in the Metabolism of Glycyrrhizin with Glycyrrhetic Acid Mono-Glucuronide by Mixed Eubacterium sp. GLH and Ruminococcus sp. PO1-3, Biol. Pharm. Bull., Vol. 23, No. 2, pp. 149-154 (2000) De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin. Nutr., Vol. 71, pp. 405-11 (2000) Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 		'											1			
 Mixed Eubacterium sp. GLH and Ruminococcus sp. PO1-3, Biol. Pharm. Bull., Vol. 23, No. 2, pp. 149-154 (2000) De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin. Nutr., Vol. 71, pp. 405-11 (2000) Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 		2												-		
 154 (2000) De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin. Nutr., Vol. 71, pp. 405-11 (2000) Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 		_														
De Roos, Nicole M., et al., Effects of probiotic bacteria on diarrhea, lipid metabolism, and carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin. Nutr., Vol. 71, pp. 405-11 (2000) Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene					o	p. 02., a., a.		00000 ap. 1 0 1 0, <u>15101.</u>		<u>Dan.</u> , Vol. 20	, 110.	2 , pp. 140				
 carcinogenesis: a review of papers published between 1988 and 1998, Am. J. Clin. Nutr., Vol. 71, pp. 405-11 (2000) Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 		3			М., е	et al., Effects of	f probio	otic bacteria on diarrhe	ea. lipi	d metabolism. a	and	-		-		
 405-11 (2000) Jin, L.Z., et al., Digestive and Bacterial Enzyme Activities in Broilers Fed Diets Supplemented with Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 			carcin	ogenesis:	a rev	riew of papers p	, publish	ed between 1988 and	1998,	Am. J. Clin. Nu	ıtr., V	ol. 71, pp.		ĺ		
 Lactobacillus Cultures, Poultry Science, Vol. 79, No. 6, pp. 886-891 (2000) Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 										-						
 Klaenhammer, Todd R., Functional Activities of Lactobacillus Probiotics: Genetic Mandate, Int. Dairy Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 		4									mente	ed with	•			
 Journal, Vol. 8, pp. 497-505 (1998) Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 			Lactor	pacillus Cu	ılture.	s, <u>Poultry Scier</u>	<u>ice, Vo</u>	l. 79, No. 6 , pp. 886-8	891 (2	000)						
 Kleeman, E.G., et al., Adherence of Lactobacillus Species to Human Fetal Intestinal Cells, J. Dairy Sci., Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 		5					Activitie	es of Lactobacillus Pro	biotic	s: Genetic Mand	date,	Int. Dairy				
 Vol. 65, No. 11, pp. 2063-2069 (1982) McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 			Journa	ai, Vol. 8,	pp. 4	97-505 (1998)										
 McBain, A. J., et al., Ecological and physiological studies on large intestinal bacteria in relation to production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 		١٥														
production of hydrolytic and reductive enzymes involved in formation of genotoxic metabolites, J. Med. Microbiol., Vol. 47, pp. 407-416 (1998) 8 McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) 9 Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene		7														
Microbiol., Vol. 47, pp. 407-416 (1998) 8 McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) 9 Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene		'														
 McConnell, M.A., et al., A note on lactobacilli and β-glucuronidase activity in the intestinal contents of mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene 																
mice, Journal of Applied Bacteriology, Vol. 74, pp. 649-651 (1993) 9 Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene		8						illi and ß-alucuronidas	e activ	ity in the intesti	inal c	ontents of		\dashv		
9 Pham, P.L., et al., Production of Exopolysaccharide by Lactobacillus rhamnosus R and Analysis of Its Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene		ا	mice.	Journal of	Appl	ied Bacteriolog	y, Vol.	74 , pp. 649-651 (1993	3)	,		J		- 1		
Enzymatic Degradation during Prolonged Fermentation, Applied and Environmental Microbiology, Vol. 66, No. 6, pp. 2302-2310 (June 2000) Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene		9								amnosus R and	d Ana	lvsis of Its				
66, No. 6, pp. 2302-2310 (June 2000) 10 Wilson, Kate J., et al., The Escherichia coli gus Operon: Induction and Expression of the gus Operon in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene																
in E. coli and the Occurrence and Use of GUS in Other Bacteria, GUS Protocols: Using the GUS Gene		66, No. 6 , pp. 2302-2310 (June 2000)														
		10	Wilsor	ı, Kate J.,	et al.	, The Escheric	hia coli	gus Operon: Inductio	on and	Expression of t	the g	us Operon				
as a Reporter of Gene Expression, pp. 7-22 (1992)									<u>GUS</u>	<u> Protocols: Usin</u>	g the	GUS Gene				
		l	<u>as a R</u>	eporter of	Gen	e Expression, p	p. 7-22	2 (1992)								

Examiner Signature	Date Considered	